(q) *Well deck* means a weather deck fitted with solid bulwarks that impede the drainage of water over the sides or an exposed recess in the weather deck extending one-half or more of the length of the vessel (LOD) measured over the weather deck.

[CGD 79–023, 48 FR 51017, Nov. 4, 1983, as amended by CGD 85–080, 61 FR 944, Jan. 10, 1996]

§ 171.015 Location of margin line.

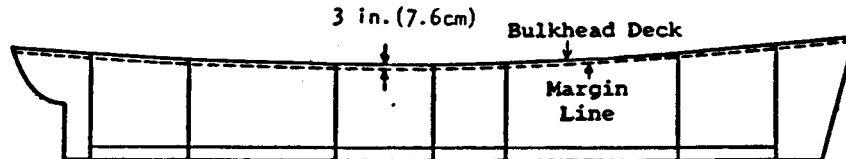(a) *A vessel with a continuous bulkhead deck and sufficient sheer.* If the average value of the sheer at the forward perpendicular (FP) and the after perpendicular (AP) is at least 12 inches (30.5 cm), the margin line must be located no less than 3 inches (7.6 cm) below the upper surface of the bulkhead deck at side as illustrated in Figure 171.015(a).

TABLE 171.015

Average value of sheer at FP and AP in inches (cm)	Required position of margin line below top of deck amidships in inches (cm)
12 (30.5)	3 (7.6)
6 (15.2)	6 (15.2)
0	9 (22.8)

Figure 171.015(a)

Margin Line for a Vessel With a Continuous Bulkhead Deck and With an Average Value of Sheer at the FP and AP of at Least 12 Inches (30.5 cm)

(b) *A vessel with a continuous bulkhead deck and insufficient sheer.* If the average value of the sheer at the forward perpendicular (FP) and the after perpendicular (AP) is less than 12 inches (30.5 cm), the margin line must be a parabolic curve with the following characteristics:

(1) The parabolic curve must be at least 3 inches (7.6 cm) below the upper surface of the bulkhead deck at the FP and AP.

(2) The parabolic curve must be at least the distance given in Table 171.015 below the surface of the bulkhead deck amidships.

(3) Intermediate values not shown in Table 171.015 must be interpolated.

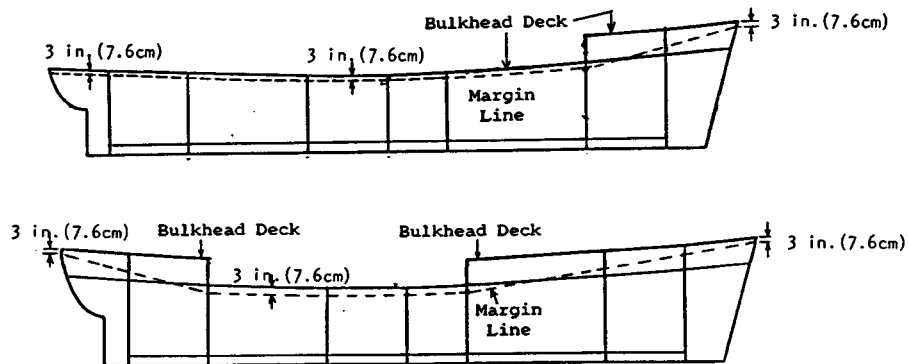(4) Figure 171.015(b) illustrates a margin line drawn in this manner.

Figure 171.015(b)

Margin Line for a Vessel With a Continuous Bulkhead Deck
and With an Average Value of Sheer at the FP and AP Less
Than 12 Inches (30.5 cm)
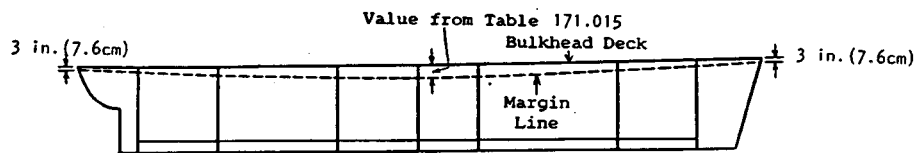
(c) *A vessel with a discontinuous bulkhead deck.* A continuous margin line must be drawn that is no more than 3 inches (7.6 cm) below the upper surface of the bulkhead deck at side as illustrated in Figure 171.015(c).

Figure 171.015(c)

Margin Line for a Vessel With a Discontinuous Bulkhead Deck

(d) *A vessel with a discontinuous bulkhead deck where the side shell is carried watertight to a higher deck.* A continuous margin line must be drawn as illustrated in Figure 171.015(d).

Figure 171.015(d)

Margin Line for a Vessel With a Discontinuous
Bulkhead Deck and With Side Shell Watertight to a Higher Deck
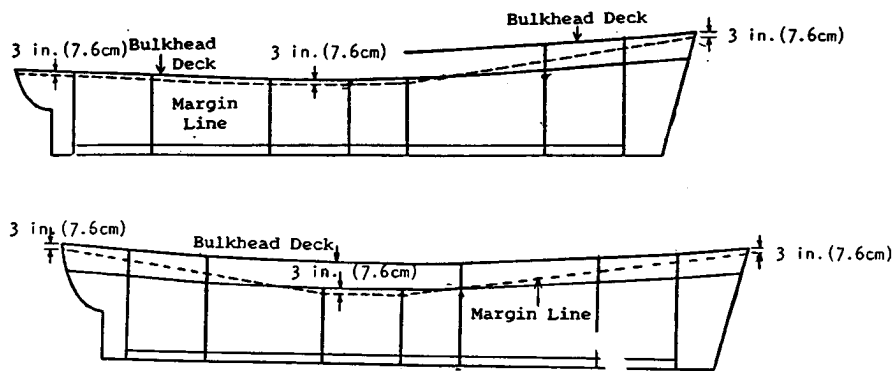
§171.017 One and two compartment standards of flooding.

(a) *One compartment standard of flooding.* A vessel is designed to a one compartment standard of flooding if the margin line is not submerged when the total buoyancy between each set of two adjacent main transverse watertight bulkheads is lost.

(b) *Two compartment standard of flooding.* A vessel is designed to a two compartment standard of flooding if the margin line is not submerged when the total buoyancy between each set of three adjacent main transverse watertight bulkheads is lost.

Subpart B—[Reserved]

Subpart C—Large Vessels

§171.045 Specific applicability.

This subpart applies to each vessel that fits into any one of the following categories:

(a) Greater than 100 gross tons.

(b) Greater than 65 feet (19.8 meters) in length.

(c) Carries more than 12 passengers on an international voyage.

(d) Carries more than 150 passengers.

(e) The stability of which is questioned by the OCMI.

§171.050 Intact stability requirements for a mechanically propelled or nonself-propelled vessel.

Each vessel must be shown by design calculations to have a metacentric height (GM) in feet (meters) in each condition of loading and operation, that is not less than the value given by the following equation:

$$GM = \frac{Nb}{(K)(W)(\tan(T))}$$

where—

N=number of passengers.
W=displacement of the vessel in long (metric) tons.
T=14 degrees or the angle of heel at which the deck edge is first submerged, whichever is less.
b=distance in feet (meters) from the centerline of the vessel to the geometric center of the passenger deck on one side of the centerline.
K=24 passengers/long ton (23.6 passengers/metric ton).

§171.055 Intact stability requirements for a monohull sailing vessel or a monohull auxiliary sailing vessel.

(a) Except as specified in paragraph (b) of this section, each monohull sailing vessel and auxiliary sailing vessel must be shown by design calculations to meet the stability requirements in this section.

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